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ABSTRACT

This manual provides guidelines for safe feeding practices for students with disabilities in Oregon schools. Stressed is the importance of distinguishing between feeding for the maintenance of health and feeding for the acquisition of skills. Individual sections cover: definitions of feeding programs; the school district responsibility; risks; resources available within the educational setting; assessment; determining the need for a medical assessment; the educational team; training others to feed safely; responsibilities of the trainee; monitoring of safe feeding programs; other health factors affecting safe feeding; environmental issues affecting safe feeding; remedial feeding/eating; liability; and cost of safe feeding programs. Appendices include the following: a safe feeding checklist; a feeding protocol; a health care plan; a sample training packet; sample non-oral feeding procedures; sample feeding forms; a list of 27 nutrition books/articles for special needs children; and an emergency protocol. (DB)

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FEEDING STUDENTS IN SCHOOL

Providing Guidelines and Information on Safe Feeding Practices For Special Students

A cooperative effort of

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Karen Yohn
Penny R. Reed

and the

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Feeding Students in Schools

Providing Guildelines and Information on Safe Feeding Practices For Special Students

1992

A cooperative effort of

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Preface

Until 1975 and the passage of the Education for All Handicapped Children Act (PL 94-142), students with feeding/eating disorders were seldom seen in the public schools. Due to the complex nature of their disabling conditions, most of these children either did not survive or were educated in special (usually hospital) schools, or home programs. This is no longer true.

Today, with the effort to educate ALL students in the regular classroom as much as possible, regardless of disability, many children with critical care needs are being educated in regular schools and classrooms. In the school setting doctors and nurses are not available to answer questions, identify and attend to critical medical issues, or respond to emergency situations. The few medically trained personnel such as physical therapists, occupational therapists and school nurses that may provide support to students in educational programs are not always available and in addition, may not be trained to address specific feeding/eating difficulties if they arise. Therefore, it is important that procedures for safe feeding be in place, that feeding programs and protocol be designed, and that personnel be trained to understand and carry out these programs. All of these factors must be addressed to ensure the safe feeding of students who are medically fragile and at risk for aspiration or other life threatening incidents. These students are the focus of concern for this document.

Introduction

This manual was developed out of the concern expressed by administrators, educators, parents, and health care providers for the safe feeding of students in Oregon schools. The primary goal of this document is to provide guidelines for safe feeding practices. A secondary goal of this document is to inform educators and therapists of the differences between feeding for the maintenance of health and feeding for the acquisition of skills. It is often assumed that the two practices are synonymous. They are not. It is important for school personnel to have a clear understanding of those differences in order that school-based teams can make informed decisions when developing feeding programs for individual students. It is hoped that after reading these guidelines, school district personnel will have a better understanding of the differences between feeding programs designed to protect a child from danger and feeding programs designed to enable students to acquire eating skills.

I. Feeding Programs Defined

For the purpose of this document, we have chosen to use the term **"protected feeding"** to mean feeding to maintain the health of the student. The term **"remedial feeding"** is used to designate feeding that employs specific therapeutic techniques designed to enable the student to acquire eating skills. The term **"safe feeding"** applies to all instances of feeding in the schools. Safe feeding is protection from a life threatening episode of choking brought on by poor feeding or eating techniques, distractions, fluctuating health conditions or lack of staff knowledge and training. All of these feeding programs require specific expertise to develop and implement. The term **"specialist"** is used here to mean a nurse, occupational therapist, or speech/language pathologist because they traditionally have specific instruction in the area of feeding disorders as part of their basic training. In addition, many physical therapists have taken additional training in feeding disorders and may be considered specialists. These guidelines are intended to provide a framework for planning and implementing safe feeding programs for all students.

A **protected feeding program** is a program developed by a qualified specialist or a team of qualified specialists to minimize the effects of a student's oral-motor disability on the activity of eating while at school. A protected feeding program is needed for any student who has pathological and/or developmental reflexes that cause the child to be at risk for aspiration, **and which is not likely to be improved through training.** A protected feeding program includes safe feeding procedures that are utilized to assure that the student is not exposed to an undue risk of choking and/or aspiration and that the student is adequately hydrated and nourished during school hours. Protected feeding is required under IDEA as a related service because it is necessary in order for the student to benefit from special education (34 CFR 300.13). When a school provides any feeding program, the school district always has an obligation to assure that it is a safe feeding program. If a student requires specific intervention to be fed safely due to an eating disorder, the information necessary to ensure the protected feeding program becomes part of the **health care plan** for the student and does not include student performance goals or objectives related to the student's acquisition of eating skills.

A **remedial feeding program** is a discretionary program designed and monitored by a qualified specialist or team of qualified specialists with the intention of helping the student acquire new eating skills. Remedial feeding uses specific therapeutic techniques to facilitate the development of motor movement or to inhibit abnormal oral-motor reflexes. Remedial feeding is a part of a student's specialized instruction and therefore part of a student's Individual Educational Plan (IEP) or Individual Family Service Plan (IFSP). The decision to include remedial feeding must be based on the student's unique needs. The program is developed by the IEP-IFSP team through the IEP-IFSP process which includes input from the parent. A remedial feeding program is designed for a specific student when his/her eating ability is judged to impede educational progress **and to have potential for change**.

II. School District Responsibility

All feeding must be safe. Safe feeding for all students is a responsibility of the school district. Regardless of whether the student with an oral-motor disability is an oral eater or must be tube fed and whether the student is a candidate for protected feeding or remedial feeding, it is the responsibility of the district to plan and implement a feeding program that safely meets the health and nutritional needs of the individual student. In most cases, this will be a protected feeding program of either oral feeding or tube feeding. In some cases, a student may also be involved in a remedial feeding program designed to help that student acquire specific eating skills. It is the responsibility of the school district to assure that both the protected feeding program and the remedial feeding program are safe feeding programs that meet the health and safety needs of the student.

Table 1 - Characteristics of Feeding Programs

	Protected Feeding	Remedial Feeding
Districts obligated to provide	X	
Feeding program part of health care plan	X	
Feeding program based on safe feeding guidelines	X	X
Feeding program developed and monitored by expert specialist(s)	X	X
Design of the feeding program is team decision	X	X
Feeding program is listed in IEP/IFSP as related service	X	
Feeding program is part of specifically designed instruction in IEP/IFSP		X
Feeding program needed to support student's educational performance or allow student to remain at school	X	
Feeding program includes goals and objectives		X

III. Risk

Feeding another person is a risky business. Feeding is particularly problematic for students who have abnormal oral muscle tone and/or lack oral motor control. These problems are usually due to a neuromuscular disorder such as cerebral palsy or traumatic brain injury. Students with oral musculature difficulties, whether they have been labeled as medically fragile or not, are at risk for a life threatening incident every time they eat or are fed. **It is important that school personnel and staff recognize the critical nature of the eating process and attend carefully to these guidelines.**

Tube Feeding. There are some students enrolled in school who, regardless of the expertise of those doing the feeding, cannot be safely fed by mouth. These children may be candidates for gastrointestinal tube feeding, a process that can safely occur in schools after the child has surgery in preparation for tube feeding. Oral feeding of these students presents an extreme risk to the district, as well as to the student.

The risk factors listed in Table 2 must be considered when determining the risk of feeding a child with a feeding/eating disorder.

Table 2 - Risk Factors in Feeding Disorders

	Low Risk	High Risk
Muscle Tone	slightly low or slightly high	extremely low or extremely high
Swallow	strong	weak, out of sync
Tongue Thrust	absent	present
Voluntary Head Control	fair to good	poor to fair
Cough	strong, protective	weak to absent
Gag Reflex	strong, protective	weak to absent
Congestion	0 to mild	moderate to severe
Secretions (Drooling)	0 to mild	moderate to severe
Cognition	alert, aware	poor response
Growth	adequate	poor
General Health	adequate	poor
Other Health Conditions	none to minimal	serious factor

One can expect that a student with a feeding disorder may exhibit a combination of several of the risk factors listed in Table 2. The exact combination and severity of each factor may vary from day to day and at different times of the day. Other factors may also influence the student, such as fatigue, illness, medications, a loud, distracting environment, etc. The use of a safe feeding checklist (such as the example in Appendix A) will assist caregivers in determining the safest course of action in feeding the student with a feeding disorder at a particular meal.

IV. Resources Available Within the Educational Setting

The School Nurse

The school nurse is responsible for the overall health concerns of the student. Duties include the development of health care plans and emergency protocols for students who require them due to the inherent risk factors of their disabilities. The school nurse has the responsibility of insuring that individual students are adequately nourished while at school. The nurse monitors the health and nutritional aspects of both oral and nonoral feeding programs of students with eating disorders. In addition, the nurse is the one person on the educational team who is knowledgeable in the care and application of gastrointestinal tube feeding techniques and is responsible for the training and monitoring of those programs.

The School Therapist

The physical therapist and occupational therapist work closely with the nurse when assessing and developing feeding programs for specific students to insure that the health concerns and nutritional needs of the students are addressed within those designs. The therapist is responsible for the physical positioning, functional movement, and oral-motor management of the student with an eating disability and can be expected to provide input within the team process depending on the therapist's specific expertise. Both physical therapists and occupational therapists are trained in all aspects of positioning. Either discipline can recommend appropriate seating and positioning for feeding. In addition, the occupational therapist is trained in specific feeding techniques and interventions as part of the training in Activities of Daily Living. Knowledge of oral motor functioning such as lip closure, tongue movement, and swallowing is shared by the occupational therapist and speech-language pathologist.

Speech-Language Pathologist

Another important resource in the area of feeding is the speech-language pathologist. Speech-language pathologists are specifically skilled in facilitating safe swallowing and optimising the communicative aspect of eating. In addition, many speech-language pathologists are skilled in facilitating mastication (chewing) of solid food and tongue movement for swallowing liquids during the oral phase of eating.

V. Assessment

Effective management of a feeding disorder begins with a thorough assessment of the feeding process and its component problems. While feeding an infant or child with normal capability is generally considered a simple task, feeding a child with a neuromuscular disorder is much more complex. Because such a child may lack the ability to control oral musculature, a number of considerations are presented for the feeder. The child may have difficulty keeping food and liquids in the mouth and may be deficient in ability to chew, suck, or swallow. In addition, the child may have a tendency to choke easily. A student may seizure as a result of eating. For these reasons, it is critical that a child with feeding difficulties be fed only by individuals who are appropriately trained by licensed specialists with specific expertise in feeding individuals with neuromuscular disorders.

To ensure safe feeding, an evaluation of the student's positioning needs, oral motor skills, nutritional and food texture requirements, medications, general health, and possible allergies, must be completed prior to development of the feeding protocol and implementation of feeding activities at school.

The Assessment Process

Before beginning any feeding program, it is essential that a thorough assessment of oral-motor function be conducted by either clinical specialists or school specialists who are trained and experienced in feeding disorders and in working with children who have neuromuscular disorders. The assessment should be a process of gathering information which will enable the specialists to determine the child's best oral-motor functioning. During the assessment, the specialist must be able to incorporate knowledge of handling and positioning the student and the ability to monitor the student's response to sensory stimulation. In addition, they must be able to relate to the child and family and modify the environment as needed. Ideally, an assessment for feeding should be a team process involving those professionals who have expertise in the various aspects of oral-motor and behavioral performance of the student.

Included in the assessment should be a detailed history obtained from the parents or caregivers. This history should include the types of food the child is currently eating, identification of foods that are difficult for the child to manage, any past and/or current modifications of positioning and equipment, the child's food likes and dislikes, and parental concerns and problems regarding feeding. A description of the process that the family uses to feed the student is an important part of the history and should be included in the assessment. Possible food allergies and any unusual responses of the child to the feeding process also should be noted. The student's physician may need to be consulted if medical questions remain after obtaining a detailed history.

Following the history, the specialists will conduct the actual assessment of the child's oral-motor function. Generally, a feeding evaluation cannot be completed within a single observation. It may take several sessions in order to get to know the child and observe consistent eating and behavioral patterns. If it is determined that the child is at risk for choking or aspiration, reference should be made to a medical facility for a videofluoroscopy.

Once the assessment is completed, the specialists, in cooperation with the family and other team members, will develop a safe feeding plan for the child, regardless of whether the student will be participating in a protected feeding program or a remedial feeding program. The plan, which **must be in writing**, should address positioning, specialized equipment, food textures, food likes/dislikes, food allergies, feeding procedures, the child's techniques for communicating, precautions and emergency protocol. Activities to be completed prior to feeding include the following:

1. The designation of a team and/or case manager for each student to ensure that all procedures are complete prior to the initiation of a feeding program.

2. An evaluation to be completed by appropriately trained/experienced licensed specialists that results in a **written** safe feeding program.

3. The development of an **emergency protocol.** The feeding plan may be developed by school staff based on their own assessment or on information from an assessment at a medical facility.

(See Appendix B for an example of a feeding plan.)

VI. Determining Need for a Medical Assessment

If the medically trained members of the educational team such as the nurse, the occupational therapist, the physical therapist, or the speech-language pathologist are not comfortable with the information gathered from the reports and records available to them in the student's file and their observation of the student during their assessment of feeding, it may be necessary for the district to obtain a feeding evaluation from a medical source such as the Child Development and Rehabilitation Center at Oregon Health Sciences University. Effective management of a feeding disorder requires a thorough medical assessment of the major components that influence the feeding process and may best be accomplished via a multidisciplinary medical team. Possible medical team members may include a pediatric gastroenterologist and/or developmental pediatrician, a diagnostic radiologist, a speech/language pathologist, an occupational therapist, a physical therapist, a nurse, a social worker, a dietician, and a nutritionist.

A comprehensive evaluation completed by a multidisciplinary clinic team will encompass any medical diagnostic procedures needed to determine the child's health and physical status. It will also include assessments of normal and abnormal movement and postural components relative to feeding, nutritional, oral-motor, performance feeding, swallowing, and finally, the psychosocial and behavioral influences of the feeding disorder on the child and the family.

Specific assessment areas that should be considered by the team are listed in Table 3.

Table 3 - Assessment Areas

1. Neurological factors (level of consciousness, seizure activity, brainstem and cranial nerve involvement)
2. Pharmacologic factors (laxatives, sedatives, anti-convulsants)
3. Upper and lower gastrointestinal functioning (physiologically normal functioning)
4. Respiratory status (shortness of breath, diminished vital capacity)
5. Urinary functioning status (physiologically normal functioning)
6. Musculo-skeletal status (postural patterns, deformities, tone)
7. Body alignment (scoliosis)
8. Oral-facial anomalies (structure, symmetry, dentition, palate, sinus)
9. Oral-motor functioning (functioning of lips, jaw, tongue, swallow)
10. Respiratory patterns (characteristic of respiratory function)
11. Sensory status and response (nervous system organization)
12. Positioning (type, number frequency, duration of positions)
13. Cognitive functioning (ability to understand and comply with instructions)
14. Environment (distractions, room comfort, appropriate food prep materials)
15. Feeding status (oral, N.G., gastrostomy, etc.)

Determining the Need for a Nutritional Workup

Children with feeding disorders are at high risk for malnutrition because of alteration in nutrient requirements, poor nutrient intake and poor utilization of nutrients. Problems can be prevented through early identification of children at risk, nutritional assessment, intervention and monitoring success of intervention. Nutrition problems usually arise secondarily to other physiologic and psychosocial problems and may not be resolved permanently without addressing the underlying conditions that affect the child.

Assessment of children at risk for nutritional disorders should include the following: nutrition screening, nutrition assessment, health and feeding history, dietary assessment, growth profile, physical examination, feeding assessment and certain specific laboratory testing, i.e., calcium blood levels.

Determining Need for a Videofluoroscopy

If a swallowing disorder is suspected, referral for a videofluoroscopy may be recommended for the child's safety. A comprehensive feeding evaluation that may include a videofluoroscopy is done in a medical facility. This evaluation helps to provide information about appropriate and safe methods of feeding the child, appropriate foods, adaptive equipment useful in the feeding situation, and may include simple techniques or suggestions to improve the feeding of the student. If the clinic evaluation determines that the child is "at risk" for aspiration, further testing through a videofluoroscopy is usually recommended. Videofluoroscopy is a medical evaluation which must be done in a facility where there is specialized equipment and trained staff to perform the tests and analyze the results. (Only a few medical facilities in the state are so equipped.) Videofluoroscopy indicates whether a child is aspirating (taking into the lungs) food or liquid. Table 4 lists the indicators of aspiration. When aspiration occurs, the child is at high risk for being unable to breath and may choke to death. Non-oral feeding methods, i.e., tube feeding, may be the best option if the child is aspirating.

Table 4 - Ten Indicators of Aspiration

1. Medical History
   Pneumonia, bronchitis, asthma
   Aspiration episode
   Reflux
   Abnormal esophagus: stricture, esophagitis, abnormal mobility, achalasia
   Lack gag reflex
   Needs tube feeding

2. Dramatic events have happened
   Cyanosis or apnea
   Food stuck in throat or esophagus/required Heimlich

3. Not enough intake
   History of dehydration
   History of unexplained weight loss (>10%)
   Underweight

4. Cough, gagging or choking

5. Wheeze or asthma

6. Rapid breathing or fatigue with meals
   "Wet" respirations with meals

7. Vomiting or regurgitation
   Rumination
   Smells of vomit
   Smells of food or supplement after a meal

8. Drooling or food falls out of mouth
   Pooling of food in mouth
   Takes multiple swallows to clear mouth
   Need to overfill mouth to swallow

9. Spurting or forceful ejection of food/fluid during swallow

10. Mealtime "Behaviors"
    a. Eats slowly
    b. Fear or reluctance with meals
    c. Dislikes or refuses fluid or food
    d. Eats in odd or unusual way
       - Throws head back
       - Swallows large mouthful rapidly

VII. The Educational Team

Function

If adequate medical information about the child's eating/feeding abilities and needs is already available and is (or can be) included in the student's educational file, it may not be necessary to refer the student for a clinical workup that takes place in a medical facility. Instead, the educational team may complete the student's assessment, using the medical information in the student's record. In addition to obtaining information from medical and school records, the team should seek input from the student's family and primary caregivers. Their information will provide the educational team with valuable insights regarding the history and behavior of the student that will help in assessing the needs of the student.

The Decision-Making Process

The educational team has the responsibility to consider first and foremost, the safety needs of the individual student when making decisions regarding feeding programs. In addition, the team must determine the liability risks of feeding activities for the student, teacher, instructional assistant, therapist, and the school district. These factors must be taken into account when the team is deciding whether the student will receive a protected feeding program as a related service (with details listed in a healthcare plan*) or participate in a remedial feeding program as part of their specially designed instruction (as reflected in goals and objectives written on the IEP/IFSP).

Developing a Safe Feeding Program

The development of a safe feeding program to be used for a specific student must involve a team process that follows specific guidelines. The process should utilize the expertise of all members of the educational team. Composition of the educational team will vary from one school district to another but may include the following disciplines: the teacher, parents, school administrator, O.T., P.T., speech-language pathologist, school nurse, and other personnel involved in the student's program. **At least one member of the educational team must be trained and experienced in working with children who have orthopedic, neuromuscular or other disorders that may impact the student's ability to be fed safely. This experienced professional would have an understanding of oral-motor skills and their developmental acquisition.**

In addition, the experienced professional should have training and experience with assessment and program planning for students with feeding disorders. If this expertise is not available from the local school district staff, the district should seek it from an outside source.
The contribution of each team member will vary depending on the members' training and experience. Table 5 contains a very general guideline on the make up of the team and the possible contribution of each member.

(*A plan developed by the team to specify the ways in which the medical and safety needs of the student are to be met by the caregivers in the educational environment. See Appendix C.)

Table 5 - Team Member Contributions

1. **Parent or Caregiver** - to provide background information on current home practices at mealtime, and indicate desired feeding outcomes for the child.

2. **Teacher** - to provide information on the student's behavior and designate classroom resources and schedule.

3. **School Nurse** - to provide nutritional and diet information and provide information on safe practice regarding health risks, e.g., choking, seizures, vomiting.

4. **Occupational Therapist** - to assess oral skills as they relate to mastication and swallowing. To assess the need for and appropriateness of adaptive equipment.

5. **Speech-Language Pathologist** - to assess oral skills as related to mastication and swallowing, communication skills, and communicative needs during feeding.

6. **Physical Therapist** - to assess the student's body alignment and positioning needs to allow optimum breathing, oral-motor functioning and swallowing during mealtimes.

7. **School Personnel** - to carry out feeding programs as directed.

In addition, consultation with the student's physician to provide background information, precautions, health status, medical concerns and other pertinent information and a dietician to provide information on nutritional and hydration status and needs of the student can provide other useful information.

When making decisions regarding the feeding of high risk students, the team needs to address a number of factors. Considerations to be addressed regarding safe feeding practice include the following:

1. Current health and environmental status of the student
2. Specific risk factors for the student
3. Availability of trained staff
4. Liability of school districts and personnel.

Table 6 on the following page lists the factors that may indicate a risk for the student.

Table 6 - Risk Factors

Medical problems:

1. weak; minimally productive; or non-productive cough
2. excessive drooling
3. poor chest expansion
4. asynchronous swallow (swallow that is not coordinated)
5. allergic response
6. thick, tenacious secretions
7. silent aspiration
8. chronic upper respiratory infection
9. failure to thrive
10. orthopedic/neurologic condition
    a. abnormal posturing and tone
    b. influence of primitive reflexes
11. alteration in consciousness (e.g., seizures)
12. changed health status

Known difficulties for the student at mealtime such as:

1. fatigue
2. interfering behaviors; social (e.g., self stimulation, acting out, spitting)
   physiological, (e.g., tactile intolerance, reflexes)
3. distractibility
4. poor appetite

Environmental conditions:

1. altered physical and/or social environment, (i.e., picnics, birthday parties, rallys, etc.)
2. inadequate or broken equipment for feeding
3. lack of positioning equipment usually used

VIII. Training Others to Feed Safely

It is the responsibility of the designated specialist to insure that all personnel involved in a student's feeding program apply consistent, best practice techniques. In addition, it is important that the staff members who are carrying out the feeding programs for the individual student feel secure and comfortable in their role. Patience and acceptance of the student as well as strict attention to the task are qualities that must be emphasized in the staff training and monitored periodically by the designated specialist.

A specialist who is well trained and highly experienced in safe feeding techniques should be responsible for training. He or she should be competent in handling and positioning children with neuromuscular disorders, be skilled in assessing oral-motor dysfunction, have the ability to develop and implement an appropriate feeding program, and be trained in emergency procedures regarding choking and seizure activity. In addition to demonstrating technical expertise, the specialist should be skilled in and comfortable with the training of others. Table 7 lists a suggested training sequence.

Table 7 - Suggested Training Sequence

1. Specific inservice training, which includes written feeding guidelines, presented by the specialist.
2. Hands on experience under the supervision of the trained specialist.
3. Periodic observation by the specialist.
4. Periodic review of the written feeding guidelines for the assigned student by the specialist.
5. Documentation by the specialist of how the task was taught, the teaching outcome and how the unlicensed person will handle any unanticipated outcomes.

IX. Responsibilities of the Trainee

No person should ever undertake feeding a child with a feeding problem without appropriate training by a licensed specialist. The trainee has the responsibility to carry out the child's feeding program as directed and monitored by the specialist. It is the responsibility of the trainee to:

1. Have available the student checklist of pertinent information (e.g., utensils, feeding procedure, safety issues, behavior) for each meal.
2. Have available any adapted/specialized equipment the child may use.
3. Have written feeding protocols available.
4. Inventory and maintain equipment.
5. Problem solve with the staff any issues that may be anticipated to impact the feeding program, (e.g., comfort level of feeder, staff time and schedule constraints, ability of staff to maintain program consistency).

Feeding should never occur in isolation - that is, other staff members must be readily available if an emergency should arise. Safe feeding may begin when the feeder meets the requirements listed in Table 8.

Table 8 - Requirements for Safe Feeding

1. Feeder is trained in CPR and techniques to dislodge food during choking.
2. Feeder is trained to be routinely monitored by professionals.
3. Feeder is knowledgeable in safe feeding techniques in general.
4. Feeder knows the specific feeding needs of the individual student.
5. Feeder recognizes when modification of current feeding practices is needed.
6. Feeder is backed up by an equally knowledgeable and trained replacement.
7. Feeder is aware when additional consultation is needed.
8. Feeder recognizes that the feeding plan and correct feeding practices can only be modified by the specialist.

X. Monitoring of Safe Feeding Programs

Staff members should be supervised at all times until they demonstrate proficiency in the various feeding techniques and are comfortable with the procedures. In addition to the initial training of staff members in safe feeding, regular ongoing supervision on the part of the responsible specialist is necessary to ensure safety. After this period of initial training, supervision should be scheduled at regular periodic intervals. To assure an effective and safe program, it is necessary to train at least two people who are involved with the student on a daily basis so that the student and both staff members are comfortable with the process.

Training and monitoring of feeders is the responsibility of experienced, licensed health care personnel. Nurses and occupational therapists licensed in the state of Oregon are required to follow specific licensing guidelines in training and delegating tasks to unlicensed personnel. Physical therapists and speech pathologists are expected to follow more general, but still binding, professional guidelines. Training that is documented and then periodically reviewed allows for consistency in program implementation and identifies additional training needs.

Monitoring activities of a student's feeding program should include considerations of the questions in Table 9.

Table 9 - Monitoring Questions

1. Quality control of the student's program:
   a. Is it consistent?
   b. Is it effective?
   c. Do changes need to be made?

2. Feeding environment for the student:
   a. Is it safe?
   b. Is it appropriate?
   c. Is it free of distraction?

3. Is the staff comfortable with feeding student?
   a. Are staff questions being solicited and answered?

Monitoring should take place on a regular schedule, (i.e., weekly, bi-weekly, monthly). In addition, the responsible specialist should plan occasional "drop-in" visits to ascertain that the procedures followed during the scheduled visits are also followed at other times.

The specialist must plan to periodically re-train all staff who are doing feeding to ensure the necessary techniques and procedures are fresh in their minds. Of course, any change in the status of the child's ability to chew or swallow should be called to the attention of the responsible specialist and should receive prompt attention.

If a child exhibits frequent wheezing, coughing or choking while eating or drinking, or if the child is consistently congested, a new feeding evaluation with a possible videofluoroscopy may be recommended by the staff. School staff may be reluctant or even unwilling to feed very high risk students, fearing they will be held responsible if a problem arises. If, indeed, the risk in the feeding situation is considered very great, the school must identify options other than oral feeding. One option the

school might consider is recommending the student for an evaluation to determine if a gastrostomy tube would be more appropriate. Other options include having the student attend a partial school day, so that mealtimes do not occur while the child is at school, asking a family member skilled at feeding the child to do this at school, or hiring a medically trained person (e.g., a nurse) to feed this child. All of these options require the school district to follow the procedural safeguards mandated under IDEA, prior to implementation.

XI. Other Health Factors Affecting Safe Feeding

Some students may have other health problems that will affect their response to feeding programs. Possible factors to consider for students at risk are listed in Table 10.

Table 10 - Other Health Problems That Affect Feeding

Failure to thrive due to:	**Feeding problems due to:**	**Obesity due to:**
oral-motor dysfunction	oral-motor dysfunction	immobility
high energy requirements	child's behavior	limited activity
fatigue	dysfunctional parent/child interactions related to feeding	gastrostomy
dehydration		
metabolic malabsorption		
Diarrhea/Constipation due to:	**Drug/Nutrient interaction due to:**	**Allergies due to:**
abnormal anatomy/neurologic function of intestinal tract	gastrointestinal disturbance	foods
abnormal muscle tone	anorexia	drugs
inactivity due to prolonged illness, immobility or paralysis	increased appetite	type of reaction, i.e., anaphylactic reaction
inadequate fluid/fiber intake	decreased consciousness	
ineffective toileting habits	interference in metabolism	
certain medications		
food types presented		

The many factors that can influence the student's response to a feeding program often interact and it can be very difficult to determine the exact cause of an observed problem. Monitoring safe feeding programs can be a complex and time consuming task. It takes a great deal of time and thought on the part of the responsible specialist to complete the necessary research and training to improve his/her own skills, plus monitoring and training of direct care staff.

XII. Environmental Issues Affecting Safe Feeding

Environmental factors impact health and safety when feeding students in school. When considering program location, external stimuli, (e.g., noise, interruptions, interfering activities), may cause a student to react in a negative way that makes feeding even more unsafe. Frequently, children with feeding disorders may stiffen up in response to external stimulation, preventing safe swallowing from occurring. A quiet location with minimal stimulation is recommended for the student with feeding difficulties. This may mean that a student cannot be fed in the school lunch room. If this is the case, it may be possible to feed the student in a quiet place and then bring him to the lunch room

for socialization. Other environmental factors of concern are a student's right to privacy, food preparation, classroom hygiene and eating utensils.

Right to Privacy - Students with feeding difficulties often have trouble closing their lips, therefore they lose food and liquids back out of their mouths. If the student is sensitive about eating or being fed in the presence of his peers, he should have the option of eating in a private place. Also, if the peers are particularly insensitive about the eating/feeding process, they may need to engage in some class discussion about feelings and being considerate, etc. In the meantime, feelings of the student with feeding difficulties may be best protected by being fed in a private area. Socialization, which is often a goal that causes the student to be fed in the school cafeteria, cannot be promoted unless the necessary groundwork is laid.

Food Preparation - Because students with feeding disorders often have food specially prepared for them in the classroom, care should be taken to ensure that food is prepared, handled and served in compliance with current health standards. In addition, staff preparing food in the classroom need to be cautious of additional factors affecting the health of the students who are eating foods prepared by the staff (e.g., microwaving of foods can create hot spots with possible resultant burns to the mouth of a student; repeated warming and/or lack of refrigeration can cause bacterial contamination of foods).

Classroom Hygiene - When students eat and are also toileted and/or changed in their classroom, special care needs to be given to ensure adequate hygiene. The diaper changing area should be located away from food preparation areas. Handwashing policies need to be developed for staff and students. Guidelines need to be developed and followed to assure healthful food handling, preparation and storage, use of gloves, adequate refrigeration, and judicious heating of foods. Classroom surfaces, (i.e., sink, countertops, bathroom, towel holders, waste receptacles, refrigeration, storage, food containers), should be cleaned and disinfected in compliance with health regulations.

Eating Utensils - Students with feeding difficulties, whether self-feeding or fed by others, often require special eating utensils. These utensils can help facilitate independence with the self-feeding student or promote ease and safety while feeding a student. Eating utensils may include such things as a cut-out drinking cup, plastic coated youth spoon, or built-up handled spoon. Metal and/or flimsy plastic eating utensils are not recommended for use, as they may cause unsafe feeding conditions to arise. The feeder may feed too large a portion or the child may sustain injury to the oral cavity from unanticipated head and arm movement.

XIII. Remedial Feeding/Eating

A remedial feeding program for skill acquisition is a program developed by a team of qualified specialists using specific therapeutic interventions designed to minimize or change the underlying pathology (effects of the disease process) affecting the child's ability to eat. The term remediation is used because it describes a treatment designed to change the underlying effects of a medical condition. For instance, if a student is experiencing difficulty eating due to the neurological effects of cerebral palsy, the specialist might use therapeutic or treatment techniques such as nerve stimulation to obtain an automatic, unlearned response from nerves that are known to move specific muscles. The theory behind the application of these techniques is that when these measures are applied, the nervous system will "learn" the appropriate response and act accordingly each time food is presented.

There are a variety of remedial techniques that may be employed by a specialist to remediate (i.e., change) or ameliorate (i.e., remove) the effects of a specific disability. However, because many of these techniques are designed to stimulate and/or depress the nervous system, they involve a degree of health risk for the child. These techniques require constant monitoring by the specialist who is applying them. Because of the risk factors surrounding remedial treatment, it is important that the student's educational team consider the availability of district resources and know the district policies regarding the inclusion of remedial treatment before recommending that remedial feeding be employed to meet goals and objectives on the student's IEP/IFSP.

A remedial feeding program must be planned and implemented by a specialist with knowledge and expertise in current feeding techniques that are known to enhance a child's eating performance. If the school district does not have such an expert resource available for the design and implementation of a remedial feeding program, then remedial feeding should not be a part of a student's program **because the inclusion of such a program could endanger the student**.

While it is the obligation of a school district to provide safe feeding to **all** students, districts are **not** obligated to provide all students with feeding disorders a remedial feeding program. The interventions employed in remedial feeding are medically based, require a high degree of skilled training and are most easily carried out in a clinical setting where medical resources are available to minimize health risk to children and liability risk to personnel. The decision to include a remedial feeding program in a student's IEP/IFSP should be a team decision, based on the educational goals and objectives developed by that team. Although it may be the desire of therapists who are skilled in applying techniques to remediate oral-motor dysfunction to apply their skills to **all** students who exhibit oral- motor dysfunction, the decision to do so should be made after careful consideration of a number of factors as outlined in this manual. As indicated, remedial eating is a discretionary program. A district is not obligated to provide a remedial feeding program unless the IEP/IFSP team includes feeding goals and objectives on the student's IEP/IFSP that pertain to the acquisition or improvement of eating skills. The acquisition of eating skills must be educationally relevant.

There are several factors that may influence an IEP/IFSP team to consider the inclusion of remedial feeding goals and objectives in a student's program. These factors include:

1. The district has extensive and expert resources and is able to provide the training and close supervision required of remedial feeding programs.
2. The student is young, perhaps below the age of 8, and is participating in a developmental, skill building curriculum.
3. The district is geographically isolated and students do not have ready access to medical programs that would provide remedial feeding treatment sessions.
4. Parents have advocated for the inclusion of remedial feeding in their child's school program.

If it is the decision of the IEP/IFSP team to include remedial feeding in the IEP/IFSP as part of the student's specialized instruction, then certainly all the considerations for safe feeding apply. In addition, several other issues will need to be addressed such as:

1. The student's IEP/IFSPshould reflect functional eating outcomes as goals. The objectives must be measurable, with the expected dates of completion designated on the IEP/IFSP.
2. Remedial feeding should take place as a learning activity.
3. Remedial feeding should only take place on days that specifically trained personnel are able to feed the student.
4. Remedial feeding should take place **only** if the responsible specialist(s) is on site.

In the instance that the child is found to be aspirating food or liquids, remedial feeding is NOT recommended. If non-oral feeding is not initiated and the child still requires oral feeding at school, he/she should be fed in the least intrusive way with a great deal of attention given to:

1. Positioning that allows the child to swallow in the most efficient manner.
2. Evaluation of foods: texture and density.
3. Size of bites, placement of bites in the mouth.
4. Saliva production with certain foods.
5. Volume to be fed at one time.

These considerations should be addressed in the feeding protocol and monitored closely by the staff. All of the safe feeding practices outlined in the Protected Feeding Section of this document need to prevail.

Educators and other professionals are entrusted with the care of special needs students and have moral, ethical and legal obligations to intervene in student care in a way that keeps the student safe and healthy in the educational environment.

XIV. Liability

Although specific litigation surrounding feeding concerns in the school is not currently found in the literature, it is only a matter of time before these issues begin surfacing in the courtroom. School district administrators and their professional staff must begin addressing these concerns in such a way that risk to students and subsequent litigation can be reduced through attention to increasing the safety factors related to feeding.

Licensed personnel such as nurses, occupational therapists, and physical therapists are required by their licensing laws to perform their duties in such a way that they do not violate the law. **Behaviors considered to be negligent and that may elicit charges of malpractice include:**

1. Failure to follow physician's prescriptive measures;
2. Failure to follow standard procedures for their profession;
3. Failure to recognize a student's needs and follow up with appropriate intervention;
4. Failure to follow guidelines for delegation under licensing laws.

To ensure that a district has provided students with safe feeding practice, the following activities need to be undertaken:

1. Determine the care needed by the student and care given to the student as written in the student's Health Care Plan or IEP/IFSP.
2. Develop prescriptive and therapeutic measures that are correctly planned, executed and monitored by the appropriate personnel.
3. Make notation of student behaviors relative to feeding and specific responses to feeding events.
4. Maintain current, signed documentation which is recorded by appropriate personnel.
5. Maintain a log of monitoring and training activities carried out by the responsible specialist.

One of the most difficult situations arises when a family feels their child can be safely, orally fed, but the educational team disagrees. Generally when it is determined that a student is at risk of aspiration from oral feeding, a gastrostomy tube is surgically placed. However, in some instances, a family will refuse this surgery and request the school district to provide oral feeding. This is the

highest risk situation that a school district can encounter. The district cannot force a medical professional to delegate a task if the professional feels that the task is not safe. In this instance, the district may want to hire a medical professional to feed the student, ask the parent to feed the student, or shorten the school day for the student. In all cases, these decisions need to be made by the IEP/IFSP team following appropriate procedural safeguards. In addition, if the shortening of the school day is being considered, the MTD must be involved because this is a placement decision.

XV. Cost of Safe Feeding Programs

Like other special education and related services, cost cannot be the main factor in determining how to feed a student. It is difficult to determine the cost of providing feeding programs for children with feeding problems in the educational setting, as cost depends on a number of factors. Extensive evaluation, program development and training may be needed to assure that students with oral-motor difficulties are safely fed. Included in the process of developing a plan will be the need for team meetings to develop team consensus and follow through. In addition, it may be necessary to obtain an outside feeding evaluation that includes a videofluoroscopy of the student's swallowing pattern. This highly specialized process may have to be paid for by the school district. However, the videofluoroscopy is essential in the management of dysphagia (swallowing disorder). It is the single most informative source of information that will help develop an understanding of the clinical implications of the feeding disorder. When a feeding evaluation and/or videofluoroscopy are recommended by school personnel, the school should expect to pay for the evaluation. Even if the request is verbal, if parents are asked to arrange for evaluations, parents may expect the school to pay. Of course, since these are medical evaluations, family medical insurance, Adult and Family Services, or third-party reimbursement through Medicaid may cover part or all of the costs. Pre-authorization of payment should be explored prior to initiating the evaluation. However, parents cannot be **required** to use their private insurance coverage. They may do so on a voluntary basis only. Requiring parents to use private insurance would violate the child's right to FAPE (free appropriate public education).

It may also be necessary for a district to incur the cost of training from an outside agency, unless training the educational staff to feed specific children can be carried out by qualified district personnel, such as an occupational therapist, a physical therapist, speech/language pathologist or nurse. Even internal district training, although it may not incur direct costs to the district, is costly. The time taken by personnel for evaluation, planning, training and monitoring can be extensive, as training must be done on a one-to-one basis and each student must have more than one person trained to meet his needs. Additionally, all persons feeding students with eating disorders must have current training in CPR and know the appropriate techniques for dislodging food from the throat and windpipe. This training may involve a possible cost to the district.

The purchase of specialized equipment is also a cost factor. The equipment needed to feed students may include special cups, glasses, bowls and utensils, bolsters, positioning devices, as well as appliances such as microwave, refrigerator and blender. This specialized equipment will require that additional time, effort and money be spent.

Preventing the loss of a student's life is the primary responsibility of school staff. No matter what the dollar cost of providing safe feeding programs, both protected and remedial, it is worth it.

APPENDICES

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Appendix B - Feeding Protocol 25

Appendix C - Health Care Plan 29

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Appendix E - Non-Oral Feeding Procedures from MORP 55

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Appendix I - Emergency Protocol Form 79

Appendix A

Safe Feeding Checklist

SAFE FEEDING CHECKLIST

Student Name _____ Date _____

Designated Feeder (s) _____

_____

To your knowledge:	YES	NO
1. Has student recently missed school due to illness?	____	____
2. Has student recently been hospitalized?	____	____
3. Does student appear ill today? (e.g., fever, excessive fatigue, flu-like symptoms)	____	____

Contraindication to safe feeding checklist:

1. Student is sleeping.	____	____
2. Student is not alert.	____	____
3. Student is seizuring.	____	____
4. Student has increased drooling.	____	____
5. Student had difficulty breathing.	____	____
6. Student has increased congestion.	____	____
7. Student coughs, gags, chokes repeatedly.	____	____
8. Student attempts many times to swallow without success.	____	____
9. Student has increase tone.	____	____
10. Student has unusual skin color, (e.g., ashen, pale, bluish tinge).	____	____
11. Student is vomiting.	____	____
12. Student cannot be properly positioned.	____	____

IF ONE OR MORE CONTRAINDICATIONS ARE PRESENT, DO NOT FEED CHILD. Notify your on-site supervisor.

Do you feel that this child is physically able to eat this meal safely? ____ ____

_____ _____

Signature of feeder Date

Appendix B

Feeding Protocol

Completed Sample

Blank Sample

COMPLETED SAMPLE

Name: Johnny Smith Date: September 21, 1991

Subject: Feeding Protocol for School

School: Washington Elementary Teacher: Mrs. Wilson

Instructional Assistant: Sally Jones Specialist: Jane Reed, OTR/L

In order to maximize safety when Johnny is given a drink, snack or lunch at school, the following feeding protocols have been established.

1. Johnny will be given food or drinks by trained, designated feeders only. If designated feeders are not present, Johnny will not be fed at school. Johnny's parents will be informed that regular staff are not present.

2. Johnny can be offered a drink at any time during the morning. Because he needs fluids to prevent dehydration, he should be encouraged to take the major portion of the drink sent from home before the 10:00 a.m. recess.

3. All liquids must be thickened. To assist him to drink, support his jaw lightly as demonstrated. Place cup next to his mouth on lower lip, but not beyond teeth. Tilt cup up so liquid is at the rim. Wait for Johnny to close his mouth before tilting cup further. If needed, cue Johnny by saying "close your mouth." Allow the liquid to flow into his mouth in such a way that he can establish a rhythm of drinking. Be sure the flow is slow and that he is swallowing. Continue to support his jaw until the liquid in his mouth has been swallowed. Allow him to cough if necessary.

4. Although a snack is not part of the classroom routine, there are days when snacks are distributed for birthdays, parties or other special occasions. Arrangements should be made so that Johnny also can eat a "treat." If it is a planned party, his parent(s) may wish to send something for him. For unplanned treats, pudding snacks have to be left in the classroom for his use.

5. Johnny will be fed in his wheelchair with seat belt and chest strap on. Tray will be left on. The wheelchair can either be upright (90 degrees) or tilted back slightly (up to 3").

6. The feeder will stay with Johnny throughout the snack/meal and will not be distracted by other activities or responsibilities in the room until he is finished eating.

7. Following feeding, Johnny's mouth should be checked for any unswallowed food. This food should be cleared, as "pocketed" food could leave Johnny at risk for aspiration.

8. Johnny should remain upright for 20 minutes following eating.

BLANK SAMPLE

Name: _____ Date: _____

Subject: Feeding Protocol for School

School: _____ Teacher: _____

Instructional Assistant:_____Specialist: _____

In order to maximize safety when _____ is given a drink, snack or lunch at school, the following feeding protocols have been established.

1. (feeder)

2. (hydration)

3. (modifications to solids and liquids)

4. (special occasions)

5. (position)

6. (environment)

7. (following feeding)

8. (other)

Add as many items as are needed to meet needs of individual student.

Appendix C

Health Care Plan

SCHOOL HEALTH SUPPORT PLAN

to be attached to IEP

Student: _____ Date: _____

Support/Procedure/ Service	Schedule/Frequency	Responsible	Monitoring and Documenting Procedures

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Specialized Health Care Procedure Record

Name: _____ Grade: ____ Homeroom Teacher: _____

Procedure: _____ Physician: _____ Phone:_____

Date	Time	Comments (include absences, problems, modifications made, etc.)	Initials

Signatures	Initials	Titles

Appendix D

The material included in Appendix D is a sample packet from the Mid Oregon Regional Program (MORP). It includes many of the forms and handouts they use.

Please remember that the MORP staff would select specific pages and specific items on the pages for individual students.

Do not use these samples for specific students without checking with your regional consulting nurse or other trained specialist.

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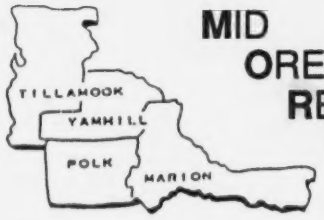

MID OREGON REGIONAL PROGRAM
3400 Portland Rd, NE
Salem, Oregon 97303
Voice/TDD Ph. 588-MORP
588-5330
Maureen T. Casey, Program Director

Training Packet Completion Checklist

My initials signify that I have read, had an opportunity to ask questions and understand the following sections of the Safe Feeding Training Packet:

	Date	Initials
Student Feeding Protocol	_____	_____
Feeding Disorder Risk Factors	_____	_____
Indicators of Aspiration	_____	_____
Safe Feeding Checklist	_____	_____
Dysphagia Guidelines	_____	_____
Guidelines for Facilitating Safe Feeding	_____	_____
Thickening Agents	_____	_____
Fluid Alert	_____	_____
Drug Interaction and Diet	_____	_____
Diet Tips for Constipation	_____	_____

Date:_____ _____
Signature

Training Date:_____ _____
Trainer

_____
Trainer

MID
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3400 Portland Rd, NE
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588-5330
Maureen T. Casey, Program Director

Name:
Date:
Subject: Feeding Protocol for Schools
School:
Teacher:
Instructional Assistant:
Therapist:

OTR/L

In order to maximize safety when _____is given a drink or snack at school, the following feeding protocols have been established.

1. _____will be given food or drinks by trained, designated feeders only. If designated feeders are not present, _____will not be fed at school. _____will be informed that regular staff are not present.

2. _____can be offered a drink at anytime during the morning. Because of the need for fluids to prevent dehydration, _____should be encouraged to take a drink at least once every hour.

3. All liquids must be thickened. To assist in drinking, support the jaw lightly as demonstrated. Place cup next to mouth on lower lip, but not beyond teeth. Tilt cup up so liquid is at the rim. Wait for_____to close mouth before tilting cup further. If needed, cue_____by saying, "Close your mouth." Allow the liquid to flow into the mouth in such a way that a rhythm of drinking can be established. Be sure the flow is slow and there is swallowing. Continue to support the jaw until liquid in the mouth has been swallowed. Allow coughing if necessary.

4. Although a snack is not part of the classroom routine, there are days when snacks are distributed for birthdays, parties, or other special occasions. Arrangements should be made so that_____also can eat a "treat." If it is a planned party, the child's mother may wish to send in food. For unplanned treats, pudding snacks have been left in the classroom for his use.

5. _____will be fed in the wheelchair with seat belt and chest strap on. Tray will be left off. The wheelchair will usually be upright, but may be tilted back slightly.

6. The feeder will stay with_____throughout the snack/meal and will not be distracted by other activities or responsibilities in the room until eating is finished.

Documentation For Safe Feeding Practice

To ensure that a district has provided students with safe feeding practice, the following documents should be in place prior to the child being fed in school:

1. Individualized Educational Plan (IEP) or Individual Family Service Plan (IFSP)
2. Individualized Health Care Plan (IHP)
3. Safe Feeding Training Packet
4. Safe Feeding Checklist
5. Feeding Assessment
6. Feeding Protocol
7. Emergency Protocol

For the purposes of maintaining safety and reduction of school district liability, care given should be addressed in the following ways.

1. Determining care needed by the student and care given to the student as written in the student's Health Care Plan.
2. Developing therapeutic measures that are correctly planned, executed and monitored by the appropriate personnel.
3. Developing health care measures that are correctly planned, executed and monitored by the appropriate personnel.
4. Making notation of student behaviors relative to feeding.
5. Making notation of student's specific responses to therapy and care.
6. Providing current, signed documentation to be recorded by appropriate personnel.
7. Maintaining a log of monitoring and training activities carried out by the specialist.

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MID OREGON REGIONAL PROGRAM
3400 Portland Rd, NE
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Voice/TDD Ph. 588-MORP
588-5330

Maureen T. Casey, Program Director

Safe Feeding Checklist

Student Name _____ Date _____

Designated Feeder(s)_____

_____

To your knowledge:	YES	NO
1. Has child recently missed school due to illness?	_____	_____
2. Has child recently been hospitalized?	_____	_____
3. Does child appear ill today (e.g., fever, excessive fatigue, flu-like symptoms)?	_____	_____

Contraindication to safe feeding checklist:	YES	NO
1. Student is sleeping.	_____	_____
2. Student is not alert.	_____	_____
3. Student is seizuring.	_____	_____
4. Student has increased drooling.	_____	_____
5. Student has difficulty breathing.	_____	_____
6. Student has increased congestion.	_____	_____
7. Student coughs, gags, chokes repeatedly.	_____	_____
8. Student attempts many times to swallow without success.	_____	_____
9. Student has increased tone.	_____	_____
10. Student has unusual skin color; e.g., ashen, pale, bluish tinge.	_____	_____
11. Student is vomiting.	_____	_____

Continued on next page

Contraindication to safe feeding checklist: (cont.)	YES	NO
12. Student cannot be properly positioned.	_____	_____

IF ONE OR MORE CONTRAINDICATIONS ARE PRESENT, DO NOT FEED CHILD.

(Notify your on-site supervisor.)

Do you feel that this child is physically able to eat this meal safely?	_____	_____

_____ _____

Signature of Feeder Date

Dysphagia Diet Guidelines

Please select both: 1. Appropriate liquid consistency 2. Appropriate food consistency

*Specify LIQUID consistency as follows:

FIRM (pudding consistency)	SOFT (honey consistency)	NECTAR (apricot juice consistency)	THIN LIQUIDS (water consistency) i.e., milk, coffee beverages

*Specify FOOD consistency as follows:

FOOD GROUP	FOODS ALLOWED Stage I All food must be thick, pureed or pudding consistency.	FOODS ALLOWED Stage II All foods must be easy-to-chew or soft honey consistency.	FOODS ALLOWED Stage III All foods must be mechanical soft.
Breads/Cereals	Thick consistency - cream of wheat, Malt-O-Meal, blended oatmeal, cream of rice.	All hot cereals, muffins, pancakes (no nuts/seeds), saltines, soda or graham crackers, (rice crispies, puffed rice allowed when thin liquids approved).	Same as STAGE II plus most breads, other cold cereals.
Eggs	None (unless blenderized with other food).	Soft scrambled, poached or minute eggs.	All
Meat	Pureed meats, blended cottage cheese, or plain yogurt.	Dysphagia soft casseroles, ground meats with extra gravy, cottage cheese, refried beans, cheese,	STAGE II plus all selective soft casseroles: Mac/cheese, chicken ala king, seafood oceania, spaghetti, meatloaf, fish, soft sandwiches.
Soups	Blenderized, specify consistency	Blenderized, specify consistency.	Specify consistency.
Vegetables/ Fruits	Pureed vegetables or fruits.	Soft canned fruits: applesauce, pears, peaches, mandarin oranges, bananas; cooked veggies: carrots, peas, beets, winter squash.	Same as STAGE II plus any cooked vegetable, no salad.
Potatoes/Rice/ Pasta	White potatoes mashed in soup.	Mashed, boiled, creamed, baked, (no skins), do not include pasta, rice or barley, unless in dysphagia casserole.	All STAGE II plus soft noodles, spaghetti, macaroni, rice.
Desserts	Smooth consistency: pudding, cream pie filling, high pro or whipped jello, custard.	Same as STAGE I, plus soft, plain cake.	Same as STAGE II - no nuts, seeds, raisins, or coconut.
Supplements	Custard, high pro jello, forta or ensure puddings, kalle gel.	Specify consistency.	Specify consistency.
Liquids	Specify consistency.	Specify consistency.	Specify consistency.

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Guidelines for Facilitating Safe Feeding

1. Toilet student prior to rest period.

2. Place student in a side-lying position for 30 minutes prior to feeding to allow for rest. This will increase energy level for eating.

3. The child should be evaluated for positioning during feeding in a way that addresses his/her disability and provides maximum success in feeding.

4. The child's head needs to be slightly forward for greatest ease in swallowing. If the child cannot maintain good head/neck control during eating, place your hands on top of the head to stabilize. Do not place hands on the back of the neck.

5. If the child wears glasses or a hearing aid, these should also be worn during meals to maximize environmental cues.

6. Sufficient time must be allowed for eating. The child should never be hurried, as this could increase the likelihood of aspiration.

7. Minimize outside distractions. Allow child to concentrate full attention on the swallowing process. Do not allow yourself or child you are feeding to become distracted by other students or classroom activities.

8. Avoid milk products and other foods that increase the child's mucous level. Also, avoid sticky foods (mashed potatoes, fresh white bread, etc.), as they may increase child's swallowing difficulty.

9. Talk the child through the feeding procedure.

10. Never use any spoon larger than a teaspoon—1/3 full minimizes aspiration. Food should be taken in small bites/sips, as chewing and swallowing movements are often slow or reduced. Allow ample time to swallow each bite.

11. Food should not be "washed down" with liquid, but alternating food with liquid may be appropriate providing the substance has been completely swallowed each time.

12. Watch for a completed swallow (the larynx will move upward), and do not offer more food until this has occurred.

13. Be sure the child has completely swallowed before placing more food in the mouth. Periodically (every three to four bites), check to be sure the child is swallowing the foods completely so that you are not packing food into the cheeks and oral cavity.

14. Thoroughly check the child's mouth during and after the meal. Food may tend to collect in cheeks and could be aspirated later if not cleared.

15. Monitor the child's fatigue level while eating.

16. If child becomes too fatigued to eat safely during the meal, once again place child in side-lying position for 30 minutes and then, if able, complete meal. Take care to store food appropriately during interim.

17. If there is evidence of frequent coughing and/or choking and/or nasal regurgitation, discontinue the oral feeding.

18. Do not force the spoon into the child's mouth. Either wait for the child to open his/her mouth or gently assist by applying light pressure downward on the chin.

19. Let the child's mouth completely close around the spoon, as this stimulates the swallowing reflex. Do not scrape the spoon off on the child's teeth or gums.

20. Attempt to remind the child to keep mouth closed while chewing, sucking, and swallowing. This will discourage certain poor patterns, such as tongue thrusting and drooling of food substance and/or saliva.

21. Coughing is a protective mechanism to avoid choking or aspirating. Should the child be attempting to cough while lying down, you may need to assist the cough by bringing him/her to a sitting position with the head slightly tilted forward.

22. Provide good oral hygiene after each meal. After brushing, toothettes are particularly helpful in removing food particles that may have been pocketed in the sides of the mouth.

23. Never leave the child alone to finish eating unless it has been demonstrated by trained staff that he/she is 100 percent safe.

24. Be prepared to handle airway obstruction by being trained in CPR and Abdominal Thrust.

Thickening Agents

Thickening agents play a major role in stabilizing the feeding process in feeding disordered students. They thicken liquids for easier swallowing and make pureed foods cohesive, which prevents aspiration. Thickening agents do not change the flavor of foods and have no after taste. Thickening agents blend smoothly and may allow normal hydration.

Thickening agents you may encounter in your school and directions for use are as follows:

THICK-IT

Preparation:

1. Add one tablespoon at a time to either hot or cold food (6 fl. oz.), stir briskly until food appears relatively smooth or use blender for 15-30 seconds to produce an even smoother texture.

2. Continue to add thickener and stir briskly until food reaches desirable thickness. Recommended maximum levels.

Quantity Liquid Food	Hot	Cold
6 fl. oz.	3-1/2 Tbs.	4-1/2 Tbs.
32 fl. oz.	1 cup 2-1/2 Tbs.	1-1/2 cups

Setting Time: One minute after thoroughly mixed.

Serving Suggestions:

Add sugar to thickened liquids (i.e., grape juice) for improved taste.
Salt may be desirable with some hot foods (i.e., soups).

THICK & EASY

Recommended usage for 4 fl. oz. serving:

	Syrup	Honey	Pudding
Clear Liquids	1 Tbs.	1-1/2 Tbs.	2 Tbs.
Full Liquids	1 Tbs.	1-1/2 Tbs.	2 Tbs.
Pureed Fruits	1 Tbs.	1-2 Tbs.	2-3 Tbs.
Pureed Meats	1 Tbs.	1-1/2 Tbs.	2 Tbs.
Pureed Vegetables	1 Tbs.	1-2 Tbs.	2-3 Tbs.
Nutritional Supplements	1-1/2 Tbs.	1-1/2 Tbs.	2-1/2 Tbs.

FRUTEX

Directions for mixing Frutex

Use 1 Tbs. of Frutex to 8 oz. in any of the following:

1. Prune juice
2. Cranberry juice
3. Apple juice

Let it set for 8-10 minutes to thicken.

Use 1 tsp. Frutex for 8 oz. in any of the following:

1. Whole milk
2. Skim milk
3. Pineapple juice

Let it set for 8-10 minutes to thicken.

RECIPES USING THICKENERS

KATIE DRINKS

Blenderize:

2 ice creams
2 jellos (prepared gelatin, approximately 8 oz. or 1 cup)
1 cup yogurt—may add cottage cheese or cream cheese (more calories)
or
2 orange sherbet
2 lemon, lime, or orange gelatins
ice cream, cream cheese

Sizes and measurements are undetermined.

SUBSTITUTE FOR THICKENERS

Blend in blender:

3/4 cup milk or juice
2 containers gelatin (8 oz.)
or
1/2 carton milk with 2 jars puree fruit
or
4 oz. juice with 1 or 2 jars baby food fruit

Ensure may be mixed with gelatin—1 cup to three (4 oz.) containers of gelatin.

Water may be blended with gelatin—1/2 glass to 8 oz. (2 cartons gelatin).

To mix Ensure with Frutex:

Put 1 tsp. (medicine cup) of Frutex in the glass first. Then gradually pour Ensure and stir it constantly to prevent it from clumping up. Let it set for 8-10 minutes to thicken.

Fruits

Applesauce	+ 1 Tablespoon Thick-it
Apricots	dash of cinnamon or allspice
Peaches	1/8 tsp. lemon juice
Pears	

THICKENED SHAKES

For Cup Drinkers

CARNATION INSTANT BREAKFAST SHAKE

1 cup ice cream
1 cup milk
1 package Carnation Instant Breakfast
2 Tbs. Karo syrup, light or dark

Blend well. Makes 15 ounces (450 cc, 1.4 cal/cc, 645 cal.).

RECIPES USING ENSURE, ENSURE PLUS OR ENRICH

1 cup Ensure, Ensure Plus or Enrich
1 cup ice cream
1 cup rice cereal

Blend well. Makes 14 ounces.

Options: Add fruit such as ripe banana or canned peaches.

****

MILK AND FRUIT SHAKES

Children with Swallowing Difficulties

BANANA-MILK SHAKE

8 oz. milk
1/2 cup baby cereal
1 mashed banana

FRUIT-MILK SHAKE

8 oz. milk
1/2 cup baby cereal
1/2-3/4 cup canned or pureed fruit
(2-3 peach halves, pear halves)

ORANGE SHAKE

1/4 cup orange juice
1/2 cup orange sherbet
1/4 cup baby rice cereal

APPLE SHAKE

1/2 cup apple juice
1/2 cup applesauce
1/4 cup baby rice cereal

Blend all shake ingredients in a blender, serve cold.

*** Be creative and make your own. Just remember, baby cereal is the thickening agent and should be used in all "shakes."

THICKENED SHAKES

For Cup Drinkers

Peachy Shake

1 cup milk
1 cup diced canned peaches
1/2 cup rice cereal

Blend well. Makes two cups (500 cc, .9 cal/cc) (75-10-11, 445 cal).

Peary Shakes

1 jar strained pears (or other fruits)
1 cup rice cereal
1 cup whole milk

Blend well. Makes 10 ounces (300 cc, 1.35 cal/cc) (56-21-13, 390 cal).

Smiley Banana Shake

1 cup milk
1 medium ripe banana
1 cup vanilla ice cream
1 cup baby rice cereal

Blend well. Makes 1 1/2 cups (400 cc, 1.7 cal/cc) (95-13-26, 690 cal).

Kennedy's High Calorie Fruit Shake

1 jar strained pears
1 pkg. vanilla Carnation Instant Breakfast
1 cup rice cereal
1 cup vanilla ice cream
1 cup whole milk

Blend well. Makes 2 cups (500 cc, 1.6 cal/cc) (109-25-27, 780 cal).

Thick Ice Cream Milk Shake

1 cup milk
1 cup vanilla ice cream
1 Tbs. vanilla flavoring
1 cup baby rice cereal

Blend well. Makes 1 1/2 cups (400 cc, 1.6 cal/cc) (77-15-32, 655 cal).-

Calorie Boosters - For Weight Gain

If your child is having trouble gaining weight, listed below are some ways to hide calories.

Powdered Skim Milk: Add 2-4 tablespoons to 1 cup milk. Mix into puddings, potatoes, soups, ground meats, vegetables or cooked cereal.

Carnation Instant Breakfast (a food supplement): Add to milk or pureed fruit to make milkshakes.

Eggs: Blend into milkshakes or other beverages. Add to casseroles, hamburger or soups.

Corn Oil or Margarine: Add to puddings, casseroles, sandwiches, vegetables, soups, cooked cereal.

Cheeses: Give as snacks or in a sandwich. Add to casseroles and potatoes.

Dried Fruits: Serve as snacks or mix into cereals or desserts.

Peanut Butter: Serve on toast, fruit or as peanut butter logs (see recipe).

Ice Cream: Use in milkshakes

Wheat Germ: Add a tablespoon or two to cereal. Mix into cookie batter, casseroles, puddings, etc.

Super Shake

1 cup ice cream
1 cup milk
1 package Carnation Instant Breakfast
Blend Well.

Peanut Butter Logs

1 cup nonfat dry milk crystals
1/2 lb peanut butter
1/2 cup honey
1 cup rice krispies
1 cup 100% bran flakes
1/2 cup raisins
Combine all ingredients well. Flatten mixture in large pan. Chill overnight, cut into 2" x 1" squares.

Super Pudding

2 cups milk
2 tbsp vegetable oil
1 pkg instant pudding
3/4 cup nonfat dry milk crystals
Stir milk and oil, add pudding mix and mix well. Pour into dishes of 1/2 cup servings.

NUTRITION IDEAS

Thicken Food

Fruit shakes - banana, pears, apricots, blended with a little milk
Wheat germ
Bran
Powdered milk
Ensure Plus, Enrich, Pediasure, Compleat
Rice cereal
Cream of wheat
Brewer's yeast
Mashed potatoes
Blended cottage cheese
Ricotta cheese
TJ's drink recipe (high calorie - recipe at bottom)

Change Texture

Fork mashed instead of blended
Puddings with graham cracker crumbs dissolved
Custards/tapioca
Refried beans
Ricotta cheese

Chewing

Cooked strips of chicken, rare beef, ham—carrots, green beans, zucchini, potatoes, French fries—raw strips of cheese, banana, jerky
Wrap food in gauze or dip rolled gauze in juice/broth

Harder to Chew Ideas

Orange segments
Cooked pea pods, celery
Dried fruit
Apple slices with/without skins

Formula for Underweight Kids Milkshake

8 oz. cream cheese
1/2 cup sugar
1 tsp. vanilla flavoring
1 egg
1 banana

Milk, enough to make liquified.

FLUIDS

Does your child:

Refuse fluids?

Need extra fluids?

Have trouble swallowing fluids?

How to help your child accept fluids:

1. Offer small frequent sips.
2. Thicken fluids like soups, stews, milk and fruit juices by adding crackers to soups and stews or making a milk or fruit shake.
3. Encourage eating of foods that become liquid at room temperature such as:
   Fruit Ice - Gelatin - Ice Cream -
   Sherbet - Fruit Juice Popsicles
4. Solid foods listed below contain fluids:
   Commercially prepared baby foods
   Yogurt
   Custards
   Junket
   Pudding
   Cottage Cheese
   Fruits and Vegetables (canned, frozen, fresh, cooked or raw)

Watch for signs of dehydration:

Thirst
Loss of appetite
Drowsiness
Flushed skin
Increased body temperature
Increased pulse rate
Increased breathing rate

The recommended amounts of daily fluids in 24 hours are:

Child's Weight	Total Fluids Needed (cups)
7 lbs	2
12 lbs	3 1/3
21 lbs	5
26 lbs	6
36 lbs	7
44 lbs	8
63 lbs	9 1/2
99 lbs	10 1/2
119 lbs	10 1/2

Drugs and Diet

Many conditions common to the developmentally delayed child are likely to necessitate long-term or prolonged treatment with drugs.

The effects of drug therapy on a child's nutritional status are important.

When Using:	Consider	Because
Anticonvulsants:		
Dilantin Phenobarbital Depakene	Taking right after meals. Vitamin D supplement. Good oral hygiene.	Decreased absorption of B12, D, calcium & folate. Nausea, vomiting, loss of taste, gum irritation with long-term use.
Antibacterial Agents (for prevention of urinary tract infections)		
Furadanon Bactrim/Macrodantin	Giving with meals.	Nausea, vomiting, abdominal pain, diarrhea.
Central Nervous System Stimulants		
Dexedrine	Giving with meals.	Anorexia (loss of appetite), abdominal pain.
Laxitives		
Colace	Administering with milk or juice.	Bitter taste, nausea, vomiting.
Mineral Oil	Taking before bedtime.	Decreased absorption of fat soluble vitamins,possible flatulence, indigestion.
Tranquilizers/Muscle Relaxants		
Valium Theophylline Thorazine	Increasing fluid intake. A high fiber diet.	Drowsiness, nausea, changes in salivation, possible constipation.
Antibiotics		
Tetracycline	Taking 1 hour before or 2 after meals. (Do not take with dairy products.)	Nausea, loss of appetite, decreased iron absorption, diarrhea.
Erythromycin	If coated, giving with meals.	

Diet Tips For Constipation

Constipation is a problem for many children with poor muscle tone, who are inactive, who are on medications to relax muscles or who receive inadequate fluids and have poor nutrition.

Extra fluids and fiber in a child's diet can help prevent constipation because fiber absorbs water and adds bulk to the stool. A bulky stool moves more easily through the bowel.

How to add extra fluids and fiber:

1. Encourage the child to drink lots of liquids. Offer juice, milk or water frequently.
2. Add 1 tablespoon of bran to foods. Slowly work up to 2 tablespoons daily. Put bran in cereal, mashed potatoes, pureed foods or combine with hamburger.
3. Try a new high fiber food from the Fiber Foods List.

Fiber Foods List:

Whole grain flours, bread products, cereals and crackers
Bran
Raw fruits and berries (preferably with skins)
Raw vegetables of all kinds (preferably with skins)
Dried fruits of all kinds
Cooked vegetables of all kinds (preferably with skins, stalks and stems)
Dried peas, beans (including sprouted), lentils
Corn
Nuts (preferably with skins)
Seeds (sesame, sunflower, pumpkin)

HIGH FIBER SNACKS

DANDY BRAN BARS

1 cup 100% bran cereal
1 cup rolled oats
3/4 cup chopped walnuts
1 cup chopped dates or raisins
2 eggs
1/2 cup plain yogurt
1/2 cup vegetable oil
1/2 cup honey
1/2 tsp. cinnamon
1/2 tsp. baking soda
1/2 tsp. salt (optional)

In a medium mixing bowl, combine bran, oats, walnuts, cinnamon, baking soda and salt (optional). When combined, mix in dates or raisins. In a smaller bowl, lightly mix eggs, yogurt, oil and honey. Pour into dry ingredients and mix thoroughly. Turn out into a well-greased 9" square pan. Spread evenly. Bake in a preheated oven at 325° for 45 minutes. Cool. Cut into squares. The bars hold together better and are easier to handle the day after they are made. Bran bars can also be frozen.

ORANGE BRAN MUFFINS

1/3 cup shortening
1/2 cup sugar
1 egg
1/2 cup All Bran cereal
1 tsp. grated orange peel
1/2 cup orange juice
1/4 cup milk
1-3/4 cups flour
2 tsp. baking powder
1/2 tsp. salt
1/4 tsp. soda

In a medium mixing bowl, combine dry ingredients and fruit. In a smaller bowl, mix wet ingredients, pour into dry ingredients. Mix completely. Turn into a well-greased 9" x 9" pan. Bake at 350° for 45 minutes. Or use muffin tin.

BRAN SHAKE

1 cup milk
1/2 cup applesauce (sweetened)
1/2 cup bran (40% Bran Flakes)
1/2 cup rice cereal (8 Tbs. baby rice cereal)

Blend in a blender until smooth.

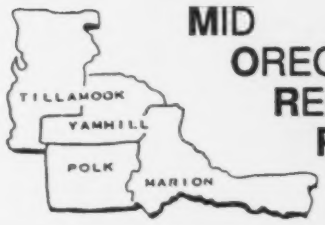
Acknowledgements

The information for this packet has been provided or excerpted in part from the following resources and references:

1. Fairview Training Center
2. The John F. Kennedy Institute
3. Denise Wolford, R.D., "Drink to Your Health"
4. Wilma King, "Blend and Mend"
5. Karen Yohn, R.N.
6. Edie Berglund, O.T.
7. Members of Feeding Task Force
8. Salem Hospital

Appendix E

The forms included in this Appendix are samples of training procedures for non-oral feeding techniques submitted by Mid-Oregon Regional Program (MORP).



MID OREGON REGIONAL PROGRAM

3400 Portland Rd, NE
Salem, Oregon 97303

Voice/TDD Ph. 588-MORP
588-5330

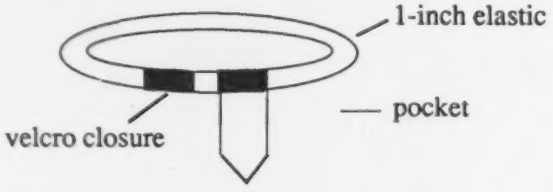
Maureen T. Casey, Program Director

Student Name_____School_____

DOB_____

GASTROSTOMY TUBE FEEDING PROCEDURE

1. All utensils need to be clean, but not sterile.
2. Formula should be at room temperature or slightly warmer.
3. If patient has a problem with regurgitation, feeding should be done with patient sitting up. Patient should remain sitting up for approximately 20 minutes after completion of feeding.
4. Before beginning feeding, check stoma and catheter to make sure areas are clean and no debris will be introduced via feeding.
5. Attach syringe to catheter and pour approximately 1-ounce warm water through tube to check tube patency and cleanse backflow from tube.
6. If tube is functioning properly, pour feeding solution into syringe. Tilt syringe slightly to allow air bubbles to escape. Allowing solution to run in too fast can cause diarrhea.
7. After feeding is finished, flush tube with approximately 1-ounce warm water to remove particles that could plug tube.
8. Make sure that clamp or plug are positioned properly to avoid leakage.
9. Tube should be pinned to clothing or placed in pocket (see illustration) to prevent accidental removal. Tube should always be higher than insertion level to prevent downflow that could plug tube.



Training of the following persons occurred on_____(date).

1._____2._____

_____
Karen Yohn, R.N., Trainer

MID OREGON REGIONAL PROGRAM

3400 Portland Rd, NE
Salem, Oregon 97303

Voice/TDD Ph. 588-MORP
588-5330

Maureen T. Casey, Program Director

Student Name_____School_____

DOB_____

Button Feeding Procedure

1. All utensils need to be clean, but not sterile.
2. Formula should be at room temperature or slightly warmer.
3. If student has a problem with regurgitation, feeding should be done with patient sitting up. Student should remain sitting up for approximately 20 minutes after completion of feeding.
4. Before beginning feeding, check stoma and button to make sure areas are clean and no debris will be introduced via feeding.
5. Attach plastic tubing to button, then attach syringe to plastic tubing. Pour approximately 1-ounce warm water through tube to check patency and flow.
6. Pour feeding solution into syringe. If flow does not begin immediately, pinch tubing. Do not allow feeding solution to run in too fast.
7. When feeding is finished, flush tubing with approximately 1-ounce warm water.
8. Remove tubing and close button to prevent leakage.

Training of the following persons occurred on_____(date)

1._____ 2._____

_____
Karen Yohn, R.N., Trainer

Appendix F

The forms included in this Appendix were developed by Christie Sullivan, OTR, and Kay Robinson, Regional Consulting Nurse for the Eastern Oregon Regional Program (EORP).

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

FAMILY FEEDING HISTORY

Name_____Parents_____

DOB_____Date of Interview_____Interviewer_____

1. Type of food child is currently eating:

2. Foods that are difficult to manage:

3. Foods the child likes and dislikes:

4. Equipment and positioning modifications (past and present):

5. Describe how child is fed at home:

6. Food allergies, sensitivities:

7. Unusual responses to the feeding process:

8. Any other information (medical, emotional) family feels is important about feeding their child:

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

ASSESSMENT FOR SAFE FEEDING AT SCHOOL

Student_____Parent(s)_____

DOB_____CA_____Address_____

School_____Teacher_____Phone_____

Assessment completed by_____Date_____

PART 1:

CIRCLE ONE		ASSESSMENT AREAS	DESCRIBE/COMMENTS, IF ANY
Yes	No	NEUROLOGICAL FACTORS (levels of consciousness, seizure activity, brainstem and cranial involvement, excess secretions, drooling.	
Yes	No	PHARMACOLOGICAL FACTORS (laxatives, sedatives, anticonvulsants).	
Yes	No	UPPER AND LOWER GASTROINTESTINAL FUNCTIONING (physiological normal functioning).	
Yes	No	RESPIRATORY STATUS (shortness of breath, diminished vital capacity, congestion).	
Yes	No	URINARY FUNCTIONING STATUS (physiologically normal functioning).	
Yes	No	MUSCULO-SKELETAL STATUS (postural patterns, deformities tone).	
Yes	No	BODY ALIGNMENT (scoliosis).	
Yes	No	ORAL-FACIAL STRUCTURE (anomalies, symmetry, dentition, palate, sinus).	
Yes	No	RESPIRATORY PATTERNS (characteristic of respiration function).	
Yes	No	SENSORY STATUS AND RESPONSE (nervous system organization).	
Yes	No	POSITIONING TYPE (type, number frequency, duration of positions).	
Yes	No	COGNITIVE FUNCTIONING (alertness, ability to understand and follow directions, distractibility, attention span).	
Yes	No	ENVIRONMENT (distractions, room comfort, appropriate food preparation materials).	
Yes	No	FEEDING STATUS (oral, nasogastric tube, gastrostomy tube).	
Yes	No	GROWTH, GENERAL HEALTH, OTHER RELATED HEALTH CONDITIONS	
Yes	No	NUTRITIONAL STATUS (diet adaptations).	

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

PART II: SENSORY/ORAL MOTOR ASSESSMENT

Name:_____ Date:_____

Assessment Area	Normal	Abnormal	Unable to Test	Comments
Facial Expression	( )	( )	( )	_____
				_____
Oral Reflexes				
Rooting	( )	( )	( )	_____
Sucking/Swallowing	( )	( )	( )	_____
Bite	( )	( )	( )	_____
Gag	( )	( )	( )	_____
Cough	( )	( )	( )	_____
Feeding Behavior				
Sucking/Drinking	( )	( )	( )	_____
Swallowing	( )	( )	( )	_____
Chewing	( )	( )	( )	_____
Oral Sensitivity				
Outside mouth	( )	( )	( )	_____
Inside mouth	( )	( )	( )	_____
Dental Development				
Bite	( )	( )	( )	_____
Teeth	( )	( )	( )	_____
Gums	( )	( )	( )	_____
Jaws				
At rest	( )	( )	( )	_____
Spontaneous Function	( )	( )	( )	_____
Lips				
At rest	( )	( )	( )	_____
Spontaneous Function	( )	( )	( )	_____
Tongue				
At rest	( )	( )	( )	_____
Spontaneous Function	( )	( )	( )	_____
Voice				
Pitch, range	( )	( )	( )	_____
Volume	( )	( )	( )	_____
Fluency	( )	( )	( )	_____
Intonation	( )	( )	( )	_____

Note: All children with swallowing or self-feeding problems are at risk for choking/aspirating! Some have more risk factor than others and require special precautions.

Summary:

( ) Child is at low risk when fed at school.

( ) Child is at high risk when fed at school and requires the following precautions:_____

_____

( ) Child has been determined unsafe to feed at school for the following reason:_____

_____

Recommendations:

( ) Video of fluoroscopy. Completion date:_____

( ) CDRC feeding clinic. Completion date:_____

( ) Other. Explain:_____

_____

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

RISK FACTORS IN FEEDING DISORDERS

Child's Name:_____Date:_____

In determining the risk of feeding a child with a feeding disorder, due to cerebral palsy or other health conditions, the following factors may be considered:

Check appropriate/best description:

	LOW RISK	HIGH RISK	COMMENT
1. Muscle Tone	( ) Slightly low ( ) Slightly high	( ) Extremely low ( ) Extremely high	
2. Swallow	( ) Strong	( ) Weak, out of sync	
3. Tongue Thrust	( ) Absent	( ) Present	
4. Voluntary Head Control	( ) Fair to good	( ) Poor to fair	
5. Cough	( ) Strong, protective	( ) Weak to absent	
6. Gag Reflex	( ) Strong, protective	( ) Weak to absent	
7. Congestion	( ) 0 to mild	( ) Moderate to severe	
8. Secretions (drooling)	( ) 0 to mild	( ) Moderate to severe	
9. Cognition	( ) Alert, aware	( ) Poor response	
10. Growth	( ) Adequate	( ) Poor	
11. General Health	( ) Adequate	( ) Poor	
12. Other Health Conditions	( ) None to minimal	( ) Serious factor	

One can expect that a feeding disordered student may fall somewhere between "Low Risk" and "High Risk" on any given day or time of day. Other factors may influence the student, such as: fatigue, illness, medications, etc. The use of the Safe Feeding Checklist will assist caregivers in determining the safest course of action in feeding the student a particular meal.

LOW RISK = 6 AND BELOW

HIGH RISK = 6 AND ABOVE

Child's Score:_____

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

FEEDING PLAN

Student_____Date_____

Designated Feeder_____

Alternate Feeder_____

Allergies_____

Positioning_____

Utensils/Equipment_____

Consistency/Texture of Food/Liquids_____

Food Likes and Dislikes_____

Feeding Procedures (time, methods, approach)_____

Child's Communication Methods_____

Precautions_____

Caloric Needs/Fluids per Day_____

Oral Care (how often, what type of brush, wash cloth on finger)_____

( ) Emergency Protocol Developed Date_____

Team Members Signatures	Date	Signatures	Date

( ) Approved by parent(s)

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

TRAINING PLAN

Student_____ Date_____

Designated Feeder_____

Alternate Feeder_____

Trainer(s)_____

Date Completed

_____ . Inservice training on: (e.g., guidelines for safe feeding in schools, or "Feeding Considerations for Children with Neuromuscular Disorders")_____

_____

_____

_____ Training packet of written materials given (list title or contents)_____

_____

_____

_____

_____ Trained in safe feeding procedures by (name)_____

_____

_____

_____ Feeder demonstrated competency in following feeding procedures (as outlined in feeding plan)_____

_____

_____

_____

_____

_____ Follow-up training sessions including_____

_____

_____

_____

_____ Review of written feeding guidelines/revisions_____

_____

_____

_____

_____

Eastern Oregon Regional Program
10100 N. McAlister Road, Island City, OR 97850

Student_____DOB_____School_____

Parents_____Home#_____Work#_____

Doctor_____Phone#_____Emergency#_____

Feeding Reminders:

1. Do not feed the child in isolation. Always have back up in case of emergency.
2. Make sure glasses are on and hearing aids are in place.
3. Keep child in up-right position for 20 minutes after feeding.
4. Do not feed the child if:
   - A. Child is having a seizure.
   - B. Child coughs, gags, chokes frequently during feeding.
   - C. Child has increased congestion or drooling.
   - D. Child is sleepy or is not alert.
   - E. Child appears ill or has fever/fatigue.
     (Notify your supervisor, notify parents, document.)

FEEDING DOCUMENTATION RECORD

Check problem areas and explain:

Date	Positioning	Utensils	Consistency	Feeding Time	Amounts	Behavior	Other	COMMENTS	INITIALS

Appendix G

Nutrition Books/Articles for Special Needs Children

Nutrition Books for Special Needs Children

"Nutrition and Feeding for the Developmentally Disabled, A How-To-Manual"
South Dakota University Affiliated Facility (SDUAF)
Center for the Developmentally Disabled
University of South Dakota
School of Medicine
Vermillion, SD 57069

"Nutritional Implications of Selected Medications Received by Children with Developmental Disabilities"
Betty Kozlowski and Beth Wenner
Ohio State University
Nisonger Center for Mental Retardation and Developmental Disabilities
1580 Cannon Drive
Columbus, OH 43210

"Nutrition and Feeding of the Handicapped Child"
Edited by Iris Crump
A College Hill Publication
Little Brown and Company
34 Beacon Street
Boston, MA 02108

"Non-Chew Cookbook"
By Randy Wilson
Wilson Publishing, Inc.
Glenwood Springs, CO 81602

"Infant Feeding Guide, Birth to Six Months"
"Infant Feeding Guide, Seven Months to One Year"
Oregon State Health Division
Office of Community Health Service
W/C Program

"New Dimensions in Nutrition"
Ross Laboratories
Division of Abbott Laboratories
Columbus, OH 43216

"Nutrition for Your Gastrostomy-Fed Child: A Parent Handbook"
University of Wisconsin Hospital and Clinics
Department of Food and Nutrition and Pediatric Pulmonary Center
600 Highland Avenue
Madison, WI 53792

"Nutrition Focus" Newsletter
$21.00 per year. Mail to Editor:
Sharon Fensht, MA, RD
Nutrition Focus, CDMRC, WJ-10
University of Washington
Seattle, WA 98195
(206) 685-1297

"Nutrition Screening for Children with Special Needs"
CHEWS Department, Public Health Division
Health and Environment Department
Harold Runnels Building, Room N3078
Santa Fe, NM 87503

"Nutrition Needs of the Handicapped/Chronically Ill Child"—Manuals I, II, III
University Affiliated Program
Cincinnati Center for Developmental Disorders
Cincinnati, OH
(Also available from National Maternal and Child Health Clearing House, next page)

Nutritional Care for the Child with Developmental Disabilities:
"Oral-Motor Development and Feeding Techniques"
"Promoting Weight Gain"
"Management of Constipation"
"Weight Control for the Overweight Child"
"Meal Planning for the Childhood Years"
United Cerebral Palsy of Greater Birmingham, Inc.
2430 11th Avenue North
Birmingham, AL 35234
(205) 251-0165

"Calculating Nutritional Requirements for Individuals with Disabilities"
Nutrition and Dietary Services
University Affiliated Center for Developmental Disabilities (UACDD)
918 Chestnut Ridge Rd, Suite #2
Morgantown, WV 26506

National Maternal and Child Health Clearinghouse
Publication Catalog
38th and "R" Streets NW
Washington, DC 20057

"Growing Children: A Parent's Guide"
Genetech Inc.
460 Point San Bruno Boulevard
South San Francisco, CA 94080

"Nutrition and Handicapped Children - A Handbook for Parents and Teachers"
By Nancy Wellman and Sheah Rarback
State of Florida
Department of Education
Tallahassee, FL 33602

"Constipation"
Maryann Breskin and Peggy Pipes
University of Washington
CDMRC
Seattle, WA 98195

"Nutrition Care Guidelines"
Marion Taylor Baer
Director of Training in Nutrition - VAP
4570 Lexington Avenue
Los Angeles, CA 90027
(213) 669-2300

"Nutrition for Children with Special Needs"
Lois Schmidt
United Cerebral Palsy of Minnesota, Inc.

"Pre-School Program Inservice Training Modules"
West Virginia Developmental Disabilities
Nutrition and Dietary Services
University Affiliated Center for Developmental Disabilities
918 Chestnut Ridge Rd, Suite #2
Morgantown, WV 26506
(304) 293-4692

"Nutrition Services for Children with Handicaps: A Manual for State Title V Program"
University Affiliated Training Program
Center for Child Development and Developmental Disorders
Children's Hospital of Los Angeles
Los Angeles, CA

"Nutrition and Immunity: Tips for Eating When You are Immune-Suppressed" (printed in English, Spanish, and French) (Postage 52 cents)

"Food Sanitation for the Immune Suppressed" (Postage 29 cents)

"Snacks for Children who are Immune Suppressed or with Aids" (postage 29 cents)
Single copy free with self-addressed, stamped, business-size envelope:
Bureau of Nutrition
NYC Department of Health
93 Worth Street, Room 714
New York, NY 10013

"Clinical Management of Gastroesophagial Reflux - A Parent Manual" ($2.00)
Division of OT
Children's Orthopedic Hospital and Medical Center
PO Box C-5371
Seattle, WA 98105
(206) 526-2114

Related articles:

"Dealing with the Dangers of Dysphagia" by Anne Loustau, RN, PhD and Kathryn A. Lee, RN, MSN.

"Knowledge and Skills Needed by Speech-Language Pathologists Providing Services to Dysphagic Patients/Clients" by the Task Force on Dysphagia American Speech-Language Association.

"Videofluoroscopic Swallow Studies with the Pediatric Patient: What, Who, When, Why, How, What to Do" by Robert B. Beecher, MS, CCC-SLP.

Appendix H

Oral-Motor Evaluation Form,
Merry Meek, M.S., CCC

ORAL-MOTOR EVALUATION FORM

1. Medical diagnoses

   Primary _____
   Secondary _____

2. General postural tone and alignment

   ☐ Hypertonicity ☐ Hypotonicity ☐ Fluctuation

3. Respiration patterns

Abdominal	☐	Rest	☐	Activity
Immature abdominal-thoracic	☐	Rest	☐	Activity
A synchronous	☐	Rest	☐	Activity

4. Changes in facial expression in an effort to communicate

   ☐ Normal ☐ Over-reaction ☐ Under-reaction

5. Oral-facial tone

Cheeks	☐	Hypertonicity	☐	Hypotonicity	☐	Fluctuation
Lip	☐	Hypertonicity	☐	Hypotonicity	☐	Fluctuation
Tongue	☐	Hypertonicity	☐	Hypotonicity	☐	Fluctuation

6. Response to touch stimulation

Outside mouth	☐	Normal	☐	Over-reaction	☐	Under-reaction
Inside mouth	☐	Normal	☐	Over-reaction	☐	Under-reaction

7. Dental bite and tooth development

   ☐ Overbite ☐ Crossbite
   ☐ Under bite ☐ Hypertrophy of gums

8. Oral reflexes

Rooting reflex	☐	Present	☐	Absent
Suck/Swallow	☐	Present	☐	Normalized
Bite reflex	☐	Present	☐	Absent
Gag reflex	☐	Present	☐	Normalized

9. Jaw function

   At rest ☐ Opened ☐ Closed ☐ Asymmetrical Posture

   In Activity - Graded open-close with

   ☐ eating
   ☐ speaking

In Activity - Ungraded open-close with

- ☐ eating
- ☐ speaking

10. Lips and cheek function

At rest ☐ Opened ☐ Closed ☐ Asymmetrical Posture

In activity - Graded open close with
☐ Eating ☐ Speaking

Closer on spoon
☐ Normal ☐ Over-reaction ☐ Under-reaction

Closer on speech
☐ Normal ☐ Hyper ☐ Absent

11. Tongue function

At rest ☐ Quiet ☐ Protruding ☐ Absent

In activity - Graded
☐ Lateral ☐ Rotational movement

Tongue movements isolated from jaw movements
☐ Yes ☐ No

12. Food and fluid intake

Variety of flavors

☐ Fruits	☐ Vegetables	☐ Meats
☐ Sweets	☐ Sour or Acidic	☐ Bland Flavors

Variety of textures

☐ Liquid	☐ Puree	☐ Semisolid
☐ Solid	☐ Hard to chew	☐ Multitexture

Quantity eaten and drunk
☐ Appropriate for age ☐ Inappropriate for age

Length of time per meal

☐ 20-30 min.	☐ 30-60 min.	☐ More than 60 min.

13. Feeding behavior

Coordination of ☐ Suck ☐ Swallow ☐ Respiration

Lip closure during swallow	☐ Yes	☐ No
Sustained bite	☐ Yes	☐ No
Munching	☐ Yes	☐ No
Vertical chewing	☐ Yes	☐ No
Rotary chewing	☐ Yes	☐ No
Jaw grading	☐ Yes	☐ No

14. Abnormal and compensatory patterns

Abnormal tonic bite	☐	Yes	☐	No
Jaw thrust	☐	Yes	☐	No
Jaw extension	☐	Yes	☐	No
Tongue thrust	☐	Yes	☐	No
Tongue protrusion	☐	Yes	☐	No

15. Positions child can be fed in

Sitting 90°	☐	Good posture	☐	Abnormal posture
Semi-reclined	☐	Good posture	☐	Abnormal posture

16. Type(s) of feeding

☐	Breast	☐	Nipple	☐	Oral
☐	NG-tube	☐	G-tube	☐	Jejunostomy

17. Method of feeding

☐	Bolus	☐	Drip	☐	Both	☐	Oral

18. Volume of feed

☐	0-2	☐	4-6	☐	8-12
☐	2-4	☐	6-8		

19. Frequency of feedings

☐	2 hour	☐	3 hour	☐	4 hour

20. Oral supplement feed

☐	0-2 oz	☐	2-4 oz

21. Gastroesophageal evaluation (GER)

UGI study	☐	Yes	☐	No
pH monitor study	☐	Yes	☐	No
Radioisotope study	☐	Yes	☐	No

22. Upper gastrointestinal results (UGI) for swallow

Oral	☐	Normal	☐	Abnormal
Pharyngeal	☐	Normal	☐	Abnormal
Esophageal	☐	Normal	☐	Abnormal
Reflux	☐	Present	☐	Absent

23. Infant state during assessment

☐	Awake	☐	Asleep
☐	Alert	☐	Fatigued
☐	Irritable	☐	Happy
☐	Hungry	☐	Full

Appendix I

Emergency Protocol Form

Emergency Protocol Form

MORP

Child's Name: _____

Birthdate: _____

Phone No: _____(h)

(Mom):_____(w)

(Dad):_____(w)

Parent(s) Name:_____

_____

Address:_____

_____

_____

_____

Alternate Emergency Contact #1:

Name: _____

Relationship: _____

Address:_____

_____

_____

Phone: _____(h)

_____(w)

Alternate Emergency Contact #2:

_____

_____

_____

_____

_____

_____ (h)

_____ (w)

DIAGNOSIS:

1. _____
2. _____
3. _____

Weight: _____

Allergies:_____

_____

MEDICATION: (24-hour period)

	Name of Medication	Dosage	Time Given	Method Given
1.				
2.				
3.				

MAJOR HEALTH RELATED CONCERNS: (Please describe)

1. _____
2. _____
3. _____

EMERGENCY ACTION:

1. _____
2. _____
3. _____

DOCTORS AND SPECIALITY AREA:

	Name	Address	Telephone	Speciality
1.				
2.				
3.				

Date: _____ Signature: _____

(Parent/Guardian)

Nurse: _____ Teacher: _____

Physician: _____ Other: _____

Signature of physician and parents indicates approval of emergency action specified.)

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